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NOTICE TO REGISTRARS.

California a Registration State.—The Federal Census Bureau has added California to the few states from which death returns are accepted as being satisfactorily complete. There were but 11 registration states in 1900, and only 5 were added in 1906. Besides California, the 16 registration states now comprise Colorado, Connecticut, District of Columbia, Indiana, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, South Dakota, and Vermont. These include the populous New England and Middle Atlantic states, a few of the most progressive Western states, and California alone on the Pacific Coast. California is thus honored by being listed with the leading states of the Union because our 1905 law for the registration of deaths is based on correct principles, as recommended by the Federal Census Bureau and the American Public Health Association, and also because local registrars throughout California have coöperated with the State Registrar by enforcing the law in a reasonably satisfactory manner.

However, this honor to the Golden State may no longer be enjoyed, if there should ever be any vital modification of the present excellent law or if there should be any failure to enforce it fully throughout California. Local registrars should therefore be vigilant in requiring undertakers to file death certificates with them that are filled out completely and satisfactorily. Age, for instance, should never be left unknown, but should be given as closely as it can be estimated from the appearance of the deceased.

Especial attention must be paid to the proper statement of the cause of death. Where death results from any form of violence, coroners must be held to a strict compliance with their duty under the State law and in all such cases must be compelled to state specifically whether it was accidental, suicidal, or homicidal. When coroners investigate deaths not resulting from violence, they must not be allowed to credit the death merely to "natural causes," but must be required to comply properly with the law by reporting just what disease caused the death, as tuberculosis, pneumonia, heart disease, Bright's disease, etc.

In all cases where a physician certifies to the cause of death, local registrars should withhold the issuance of the required burial or removal permit unless the cause of death is given in definite, satisfactory terms. Such indefinite expressions as "heart failure," "hemorrhage," "abscess," "fever," "marasmus" or "debility" (for adults), "dropsy," and "asthenia," are utterly unsatisfactory, and burial or removal permits should not be issued for death certificates with the cause of death thus carelessly stated.

VITAL STATISTICS FOR OCTOBER.

Summary.—For October there were reported 1,693 living births; 2,134 deaths, exclusive of stillbirths; and 1,376 marriages, the marriage returns being somewhat incomplete. The population of California in 1906, estimated by the Census Bureau method with slight modifications, is 1,882,846. For this population the October returns give the following annual rates: Births, 10.8; deaths, 13.6; and marriages, 8.8, per 1,000 inhabitants.

As usual, tuberculosis was the leading cause of death, with diseases of the circulatory system a close second. Typhoid fever was the most fatal epidemic disease, causing 94 deaths, or 4.4 per cent of all.

Causes of Death.—The following table gives the number of deaths due to certain principal causes in October, as well as the proportion from each cause per 1,000 total deaths for both October and September:

Cause of Death.	Deaths: October.	Proportion per 1,000.	
		October.	September.
ALL CAUSES	2,134	1,000.0	1,000.0
Typhoid fever	94	44.1	29.4
Malarial fever	12	5.6	8.9
Smallpox	----	----	----
Measles	5	2.3	1.6
Scarlet fever	2	0.9	----
Whooping-cough	6	2.8	3.2
Diphtheria and croup	18	8.4	6.3
Influenza	5	2.3	0.5
Other epidemic diseases	8	3.8	7.3
Tuberculosis of lungs	252	118.1	108.6
Tuberculosis of other organs	37	17.3	22.6
Cancer	127	59.5	57.7
Other general diseases	81	38.0	36.2
Meningitis	26	12.2	15.8
Other diseases of nervous system	164	76.9	99.2
Diseases of circulatory system	258	120.9	120.1
Pneumonia and broncho-pneumonia	166	77.8	55.6
Other diseases of respiratory system	41	19.2	26.2
Diarrhea and enteritis, under 2 years	90	42.2	53.5
Diarrhea and enteritis, 2 years and over	30	14.1	13.1
Other diseases of digestive system	120	56.2	44.6
Bright's disease and nephritis	120	56.2	60.3
Childbirth	19	8.9	7.9
Early infancy	88	41.2	29.9
Suicide	37	17.3	19.4
Other violence	180	84.4	91.8
All other causes	148	69.4	80.3

In October, as usual, tuberculosis was the leading cause of death, but, as in September, diseases of the circulatory system (heart disease, etc.) were a close second. Altogether, 289 deaths, or 13.5 per cent of all, were caused by tuberculosis of the lungs and other organs, while 258, or 12.1 per cent, were due to various diseases of the circulatory system.

Typhoid fever caused 94 deaths, or 4.4 per cent of all, in October, against only 2.9 per cent for September. There were 18 deaths from diphtheria and croup, 12 from malarial fever, 6 from whooping-cough, 5 each from scarlet fever and influenza, and only 10 from all other epidemic diseases.

HEALTH OFFICERS OF SOUTHERN CALIFORNIA.

The Southern California Medical Society will hold its next meeting December 5 and 6, in Los Angeles, and the section of Public Health and Hygiene will meet at 9:30 A. M. on December 6. Dr. Hoell Tyler, President of the Society, has kindly consented that the State Board of Health invite all the health officers of Southern California to meet and take part in this section, with the object of extending its usefulness and possibly to form an auxiliary association.

Every branch of industry and all classes of people who are working along the same general lines, find it necessary, in order to accomplish the most work, to have an organization where questions pertaining to their work can be discussed. Health officers are no exception, and indeed, perhaps there is no calling where organization can do so much good, both to the members and to the general public, as with us. While the lines of the territory over which we have actual jurisdiction are well defined, the influence of our work is unlimited and knows no boundary. Disease will not respect territorial lines nor keep within the limits of any one officer's domain. Probably no health officer of any extended experience but has often been annoyed and perplexed at his inability to check the spread of disease that was endangering his district, but was outside of it. We have many prosperous cities and towns whose territory extends to unorganized country where health officers and sanitation are both unknown. The county may have such an official, but located so far away that two days would be required to get him there. With a proper organization composed of all health officers, uniform regulations could be adopted and enforced, and much valuable time saved, misunderstandings would be avoided, and good feeling and mutual aid established.

All health officers are cordially invited and urged to attend this meeting and use their best efforts to organize in a manner that will command the respect of citizens, cultivate a mutual acquaintance and coöperation, and make more effective their work in the cause of public health.

STAMPING OUT CONTAGIOUS DISEASE.

Madera has lately had quite a severe epidemic of scarlet fever. There is nothing uncommon in this; many other towns have had the same, but the means taken to stamp it out are worthy of note. When it became evident that the disease was epidemic, Dr. Mary R. Butin, the very efficient health officer of that city, took the work in hand, and soon had it under control. The schools were all visited and each scholar examined for evidence of the disease. Each absentee was also seen and examined. If there was sore throat, fever, eruption, or scales, the child was at once sent home and isolated. The school-rooms were closed and thoroughly disinfected. This effective work soon accomplished the end sought and the epidemic ceased. Sporadic cases will probably occur for a few weeks, owing to the fact that it is almost or quite impossible to catch all the cases.

Dr. Reinhardt, Health Officer of Berkeley, in coöperation with the Superintendent of Schools, has adopted similar methods to stamp out diphtheria. In the school of that city where it exists they are having a culture made from the throat of each pupil and of each absentee. If the diphtheria bacilli are found the person will be isolated until such time as the throat is free from disease. It is easy to foresee the result. Diphtheria will vanish from the school.

These are long steps in the direction we must surely go if we expect to check contagious disease. Disinfection of rooms and things, properly done, *after* the persons are entirely free from the disease, is all right and should be attended to, but done before all persons are well is a waste of time, money, and energy, and worse than useless, as it gives a feeling of security that is without basis.

The danger is from partially recovered patients who are still swarming with bacteria, and from others equally dangerous, who, while not sick enough to feel the necessity of employing a physician, are still producers of the disease germ.

Schools should be carefully examined every morning in order to catch early cases of disease. This should be done by a physician; but the teacher could learn the early symptoms of disease, and, if her suspicion was aroused, call the physician who had been assigned to that school. The saving of money, health, and life, if this were done, would be incalculable.

We wish to congratulate the communities who have health officers with the amount of efficiency necessary to take such steps.

TYPHOID FEVER.

The more than common prevalence of typhoid fever in the State is a cause of no little anxiety. While the country around San Francisco Bay is perhaps more affected than any other part of the State, there is no portion exempt.

The State Board of Health has taken up the investigation of the causes through the State Hygienic Laboratory and the coöperation of Dr. Snow of the Hygienic Department of Stanford University. Necessarily investigations are slow when the area is so large, and meanwhile every one should exercise the greatest care to avoid contracting the disease, and those affected against giving it to others. Certain facts in relation to the disease can not be too frequently or strongly impressed upon the people.

First and foremost, every one should remember that typhoid fever is a communicable disease and that every case comes from some preceding case. The means of communication are the discharges from the body—feces, urine, and sputa. These contain great quantities of the germs, and if taken into the mouth of another, either in water, food, or from infected hands, dishes, insects, or any other thing, that party may contract the disease. This points at once to the way to prevent the spread of typhoid fever. Destroy absolutely all discharges from the body of the patient. All sputa should be received on cloths or paper and burned at once. Discharges from bowels and kidneys should be received in a vessel with a plentiful supply of a strong antiseptic solution and allowed to stand for two hours, and if the feces are hard they should be broken up. They can then be buried or put into the sewer. The following solutions are good for this purpose:

Carbolic acid, 7 ounces to gallon of water.
Chloride of lime, 10 ounces per gallon of water.

It should be remembered, in this connection, that a patient after apparent recovery from typhoid fever will sometimes produce the germs for weeks and months, and that others who have the disease and produce the germs are never sick enough to go to bed. In these cases it is impossible to take the foregoing precautions; but they can and should be careful, as should every one, not to pollute any stream of water or allow flies to have access to the discharges.

All clothing or cloths coming in contact with the patient should be boiled before leaving the house, and no person having charge of a patient should in any way have to do with a dairy or any food products. Flies should be excluded, for they, if allowed on any of the discharges, will carry the disease germs to others by alighting on food, or on the hands or face of the person. All domestic animals should be kept from the sick room.

The following are some of the ways in which the germs pass from one to another:

Probably the principal way is through water into which infected human sewage has passed. The water is polluted by towns sewering into creeks or rivers; drainage from cesspools or vaults into wells; infected dust blowing into reservoirs; by insects, birds, or domestic animals which have become polluted with infected excrement getting into tanks; by people camping on banks of streams and using them as sewers.

Green vegetables, eaten raw, which have been fertilized with human excrement.

Flies lighting on the discharges from a typhoid patient and then on food.

Milk becoming infected by washing cans in infected water, and the possible dilution of milk with the same. Milk may also become infected by a person caring for a typhoid patient, a patient recovering, or a light case working in a dairy.

Clothing worn by a typhoid patient or the bed linen will also carry the disease to another coming in contact with them.

Personal contact, as shaking hands, or otherwise handling a patient, is a frequent cause.

In case typhoid exists in one's vicinity, great care should be taken to prevent contracting it. *All water should be boiled before using.* Ordinary filtering removes dirt, but not germs. Eat no raw vegetables. Drink no soft drinks; they may be made from polluted water. If you do not know that the milk is above suspicion, boil it. Allow no flies around; they are one of the great causes of infection. Avoid unnecessary contact with the afflicted, and if contact is necessary, wash at once. Live as much as possible in the open air and get all the sunshine possible into houses and disposition. Don't be afraid of the disease, but absolutely refuse to be exposed without cause, or to use infected milk, water, or vegetables. Clean up and destroy all accumulation of dirt, manure, or garbage; they are a breeding place for vermin. Have no open cesspools or broken sewers. Insist that your city fathers furnish you *pure* water, and that they cease polluting the supply of others.

All cases should be reported at once to the health officer, who should see that all precautions are taken to prevent the spread, and hunt out and eradicate the source of infection. Don't wait until an epidemic exists; catch the first case and stop it there. The careless handling of this one may mean the death of many. Last year 425 died of typhoid fever in California, many of them among the most valuable citizens of the State. During the five years when plague existed in the State 113 died of it; the whole country was shaken with horror and hundreds of thousands of dollars were expended in the successful effort of wiping it out of existence. With a death-rate of forty times as great and a disease more easily eradicated, we sit complacently by and see it go on. The responsibility is general and the work must fall on many. Every physician should report his cases and see that all discharges are absolutely destroyed. This is primary and imperative. The health officer should see that this is done, and examine water, milk, and vegetables and any other possible source. The family must recognize the possibility of carrying the disease on their person or clothing, and act accordingly; and lastly, the patient must remember that when apparently well, he is still a producer of germs, and exercise care not to scatter them and endanger others.

SMOKE NUISANCE.

As the wet season approaches, the atmosphere, already heavily laden with smoke and unconsumed carbon from manufactories, will be made still more unbearable by the smoke of thousands of private houses.

This question is getting to be one of importance to California, and one that the Legislature, at no distant day, will have to face. As manufacturing industries increase, the cities and surrounding country will become unpleasant places in which to live, prices of property will materially decline, and, of more importance than all, the general health of the community will suffer. While smoke itself may not carry the germs of disease, it produces conditions that favor their development. It makes ready the soil, and there is plenty of seed with which it is planted. California, with its equable climate, where life in the open air is a joy for twelve months in the year, where fruits and vegetables are always fresh and in abundance, and where all the necessaries and comforts of life can be secured more easily than in any other State, should be one great sanatorium.

Thousands are yearly coming here and are bringing the fortunes made in other states, for investment. The desirableness of this State as a place of residence consists in its healthfulness and pure air. Shall we destroy these essential elements of our growth and drive from our midst such a desirable class of inhabitants? It is not necessary to curtail manufacturing or to hamper it in any way. Science has provided ways to consume the smoke, and with no very great expense. Legislative action, however, is necessary, and should be had at the coming session of the Legislature. The necessity for such action from the standpoint of public health is well shown by the following article from the Journal of the American Medical Association:

The Relation of Smoke to Sickness.

In connection with certain statements recently made in these columns concerning the relation of wind to sickness, it may be well to call attention to the rôle that smoke plays in producing sickness, especially, of course, of the respiratory tract. As is largely the case with dust in general, the particles of carbon and other matter contained in the smoke with which the atmosphere of our large cities is polluted so extensively do not produce disease directly, but rather prepare the lungs for tuberculosis and other infections. That the inhalation of smoke (and dust in general) is unhealthy can not well be questioned. Statistics show an increase in the mortality from acute pulmonary disease in manufacturing districts where much smoke is generated and also in mining districts. Tuberculosis is said to run a more rapid course in smoky than in smoke-free districts. While the factors that must be considered in order to explain the increased morbidity in these localities are numerous and complex, we can not neglect the evil influence of smoke and of carbon particles in the dust. In the first place, examination of the anthracotic lung of the miner and of the dweller of smoky cities shows changes often so marked as by themselves to cause symptoms of chronic respiratory disease. The blocking of the lymphatics and of the lymph nodes by masses of coal dust can not but interfere with the physiologic functions of these structures. In the second place, Ascher found that of animals experimentally infected with tuberculosis those that were made to inhale smoke died more rapidly than the controls. Further, he found that animals that inhaled small quantities of smoke for some time beforehand acquired pulmonary inflammation on inhaling aspergillus spores, whereas the control animals did not. The results of clinical and experimental observations consequently speak in favor of the harmfulness of smoke. In view of the prevalence and fatality of lobar pneumonia in our large cities, it would be appropriate to seek to place some of the responsibility therefor on their smoke- and dust-laden atmosphere. Fighting "the smoke nuisance" should be made part of the general plan of the campaign now in progress against tuberculosis and pneumonia.

ADULTERATED AND IMPURE MILK FOR CHILDREN.

That many people die each year as the result of using impure milk none will deny. It is equally true that all of these are sacrificed either to greed or ignorance. Desire for undue profit on the part of a few milk producers or handlers is a great element of danger, and their "doctored" products are responsible for many deaths and much sickness. Laws prohibiting the adulteration of milk should be enforced, and all violators should suffer the scorn, contempt, and loss of patronage of the people. The trouble is not, however, caused entirely by the *greedy* dealer. There is a class of milkmen who have been taught and believe that certain preservatives are harmless, and use them with good faith, honestly believing they are doing right and conferring a favor upon the consumers. It is easy for them to believe what is to their advantage, and the many articles by so-called scientific men extolling the use of preservatives naturally have this effect. These dealers can be reached by education, and a rigid enforcement of the law against adulteration is the best lesson.

But the responsibility for impure milk is not all, by any means, with the dealer or producer. The housekeeper is as often to blame. How frequently we see pitchers or pails standing out to be filled with milk when the wagon comes around. Sometimes they are within the reach of domestic animals, and most always where flies and dust can settle in them. After the milk is taken to the kitchen it is far from being safe from contamination. The pans or bowls to receive it are not always washed and scalded as the regulations of cities rightly require the milk producers to wash and scald their utensils. Sometimes flies have free access to it, and occasionally mice take a sip from the pan. Too close proximity to other food, some of which a heedless cook allows to stand until outlawed by age, does not enhance its value as food for the baby. Some doctors even go so far as to say that fond mothers occasionally feed to their children this same milk from bottles that are not properly washed, and then are so unreasonable as to blame the milkman. The milkman has his full share of faults, and none of them should be minimized, but too often a supply of good milk is spoiled at home. Milk is a most excellent food and should enter fully into the diet of children. It is, however, extremely sensitive to pollution, and is one of the best culture mediums for germs. They grow and develop in it with great rapidity, and any of the many sources of contamination may be the means of causing sickness in the consumer, especially if it is a child.

The State and municipality should insist that pure milk be furnished, and then the housewife's duty and interest is to see that it is kept so. Many of them little appreciate the danger that lurks in milk thus polluted at home, and are too free to blame the wrong source for the sickness that evidently follows its use. They should always receive the milk in a vessel that has been thoroughly scalded, and keep it entirely free from dust. A cloth cover is excellent, but this must be washed daily in boiling water. The ice box is the best place to keep milk, but it should have a separate compartment so the milk would not come in contact with other food. If ice is not used, even greater care should be taken and the coolest possible place selected, where the air has free circulation.

If no dirt or pollution of any kind is allowed in the milk from the time it is drawn until consumed, many of the troubles of childhood would be avoided.

* * * * *

"Deaths due to good sanitation at Panama, has been the startling explanation of the mortality of Jamaica negroes employed on the canal. It is seriously stated that they have cramped lungs due to generations of overcrowding in small, tightly closed, dirty huts, and that they can not withstand the fresh air and cleanliness of the 'model' houses built for them. It is doubtful whether any sanitarians suggested this remarkable explanation, for they must know that the negroes are not living in a proper way if it kills them. The causes must be discovered. There is considerable evidence that the houses are not safe, although airy, bright, and clean. The tropical native, as well as tropical animals, go to great extremes to darken their houses or hiding-places to escape the sun's rays, and have survived, perhaps, because they did hide from this danger. Sunlight may kill bacteria, but its excessive use in phototherapy is destructive of all other tissues also." —*American Medicine.*